MARKED-UP COPY OF THE CLAIMS AS AMENDED
(Provided for the Examiner's convenience only)

1-104. (Cancelled)

105. (Currently Amended) A method of selecting a dose of an anti-oxidant composition for administration to a human, the method comprising assessing an occurrence in a human's genome of a quantity of ~~an~~ oxidative damage-associated ~~polymorphism~~ polymorphisms in each of two genes, the genes consisting of a superoxide dismutase gene and a catalase gene ~~whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage to the human, relative to a human with fewer or no disorder oxidative damage-associated polymorphisms, and wherein the method assesses a relative susceptibility of the human to oxidative damage~~.

wherein the oxidative damage-associated polymorphism in the catalase gene is a polymorphism manifested as a change from a cytosine residue to a thymine residue at nucleotide residue -262 of the catalase gene and the oxidative damage-associated polymorphism in a superoxide dismutase gene is selected from the group consisting of:

a) a polymorphism manifested as a change from an alanine residue to a valine residue at amino acid residue 9 of manganese superoxide dismutase (MnSOD);

b) a polymorphism manifested as a change from an isoleucine residue to a thymine residue at amino acid residue 58 of MnSOD;

c) a polymorphism manifested as a change from a valine residue to a glutamic acid residue at amino acid residue 7 of copper/zinc superoxide dismutase (CZSOD); and

d) a polymorphism manifested as a change from a cysteine residue to a phenyalanine residue at amino acid residue 6 of CZSOD;

whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage to the human, relative to a human with fewer or no oxidative damage-associated polymorphisms~~, and wherein the method assesses a relative susceptibility of the human to oxidative damage~~.

106-109. (Cancelled)

110. (Currently Amended) The method of claim 105, the ~~a~~ method comprising assessing ~~a relative~~ the degree to which a human is susceptible to an undesirable oxidative stress condition by identifying a polymorphism in each of a gene encoding superoxide dismutase, and a gene encoding a catalase,

the polymorphism identified as correlated with the exhibition by a human of a pathology involving oxidative damage, thereafter calculating a susceptibility value for the condition by either

summing the identified polymorphisms to yield a value for the human, or

assigning a weighting factor to each polymorphism and then summing the weighting factors to yield a value for the human,

wherein a value for the human greater than ~~a value for a control~~ zero indicates a greater susceptibility to the oxidative stress condition for the human,

the method ~~hereby~~ thereby assessing the degree to which the human is susceptible to ~~the~~ an undesirable oxidative stress condition relative to a human with fewer or no oxidative damage-associated polymorphisms in these two genes.

111. (Currently Amended) A method comprising assessing occurrence in a human's genome of a quantity of ~~an~~ oxidative damage-associated ~~polymorphism~~ polymorphisms in each of two genes, the genes consisting of a superoxide dismutase gene and a catalase gene,

wherein the oxidative damage-associated polymorphism in the catalase gene is a polymorphism manifested as a change from a cytosine residue to a thymine residue at nucleotide residue -262 of the catalase gene and the oxidative damage-associated polymorphism in a superoxide dismutase gene is selected from the group consisting of:

a) a polymorphism manifested as a change from an alanine residue to a valine residue at amino acid residue 9 of manganese superoxide dismutase (MnSOD);

b) a polymorphism manifested as a change from an isoleucine residue to a thymine residue at amino acid residue 58 of MnSOD;

c) a polymorphism manifested as a change from a valine residue to a glutamic acid residue at amino acid residue 7 of copper/zinc superoxide dismutase (CZSOD); and

d) a polymorphism manifested as a change from a cysteine residue to a phenyalanine residue at amino acid residue 6 of CZSOD;

whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage relative to another human with fewer or no oxidative damage-associated ~~polymorphism~~ polymorphisms, and thus a desirability to administer an antioxidant composition ~~or an increased dose of an antioxidant composition~~ to the human.

112. (Currently Amended) The method of claim 105, ~~A method comprising assessing an occurrence in a human's genome of a quantity of an oxidative damage-associated~~

~~polymorphism in each of two genes, the genes consisting of a superoxide dismutase gene and a catalase gene,~~

~~wherein the oxidative damage-associated polymorphism in the catalase gene is a polymorphism manifested as a change from a cytosine residue to a thymine residue at nucleotide residue -262 of the catalase gene and the oxidative damage-associated polymorphism in a superoxide dismutase gene is selected from the group consisting of:~~

~~a) a polymorphism manifested as a change from an alanine residue to a valine residue at amino acid residue 9 of manganese superoxide dismutase (MnSOD);~~

~~b) a polymorphism manifested as a change form from an isoleucine residue to a thymine residue at amino acid residue 58 of MnSOD~~

~~c) a polymorphism manifested as a change from a valine residue to a glutamic acid residue at amino acid residue 7 of copper/zinc superoxide dismutase (CZSOD); and~~

~~d) a polymorphism manifested as a change from a cysteine residue to a phenyalanine residue at amino acid residue 6 of CZSOD;~~

~~whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage to the human, relative to a human with fewer or no oxidative damage-associated polymorphisms,~~ ~~and~~ wherein the method assesses a relative susceptibility of the human to the oxidative damage.

CLEAN COPY OF THE CLAIMS AS AMENDED
(Provided for the Examiner's convenience only)

1-104. (Cancelled)

105. (Currently Amended) A method of selecting a dose of an anti-oxidant composition for administration to a human, the method comprising assessing an occurrence in a human's genome of a quantity of ~~an~~ oxidative damage-associated polymorphisms in each of two genes, the genes consisting of a superoxide dismutase gene and a catalase gene

wherein the oxidative damage-associated polymorphism in the catalase gene is a polymorphism manifested as a change from a cytosine residue to a thymine residue at nucleotide residue -262 of the catalase gene and the oxidative damage-associated polymorphism in a superoxide dismutase gene is selected from the group consisting of:

a) a polymorphism manifested as a change from an alanine residue to a valine residue at amino acid residue 9 of manganese superoxide dismutase (MnSOD);

b) a polymorphism manifested as a change from an isoleucine residue to a thymine residue at amino acid residue 58 of MnSOD;

c) a polymorphism manifested as a change from a valine residue to a glutamic acid residue at amino acid residue 7 of copper/zinc superoxide dismutase (CZSOD); and

d) a polymorphism manifested as a change from a cysteine residue to a phenyalanine residue at amino acid residue 6 of CZSOD;

whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage to the human, relative to a human with fewer or no oxidative damage-associated polymorphisms.

106-109. (Cancelled)

110. (Currently Amended) The method of claim 105, the method comprising assessing the degree to which a human is susceptible to an undesirable oxidative stress condition by identifying a polymorphism in each of a gene encoding superoxide dismutase, and a gene encoding a catalase,

the polymorphism identified as correlated with the exhibition by a human of a pathology involving oxidative damage, thereafter calculating a susceptibility value for the condition by either

summing the identified polymorphisms to yield a value for the human, or

assigning a weighting factor to each polymorphism and then summing the weighting factors to yield a value for the human,

wherein a value for the human greater than zero indicates a greater susceptibility to the oxidative stress condition for the human,

the method thereby assessing the degree to which the human is susceptible to ~~the~~ an undesirable oxidative stress condition relative to a human with fewer or no oxidative damage-associated polymorphisms in these two genes.

111. (Currently Amended) A method comprising assessing occurrence in a human's genome of a quantity of oxidative damage-associated polymorphisms in each of two genes, the genes consisting of a superoxide dismutase gene and a catalase gene,

wherein the oxidative damage-associated polymorphism in the catalase gene is a polymorphism manifested as a change from a cytosine residue to a thymine residue at nucleotide residue -262 of the catalase gene and the oxidative damage-associated polymorphism in a superoxide dismutase gene is selected from the group consisting of:

a) a polymorphism manifested as a change from an alanine residue to a valine residue at amino acid residue 9 of manganese superoxide dismutase (MnSOD);

b) a polymorphism manifested as a change from an isoleucine residue to a thymine residue at amino acid residue 58 of MnSOD;

c) a polymorphism manifested as a change from a valine residue to a glutamic acid residue at amino acid residue 7 of copper/zinc superoxide dismutase (CZSOD); and

d) a polymorphism manifested as a change from a cysteine residue to a phenyalanine residue at amino acid residue 6 of CZSOD;

whereby each occurrence of an oxidative damage-associated polymorphism in each gene indicates an increased susceptibility of the human to a pathology involving oxidative damage relative to another human with fewer or no oxidative damage-associated polymorphisms, and thus a desirability to administer an antioxidant composition to the human.

112. (Currently Amended) The method of claim 105, wherein the method assesses a relative susceptibility of the human to the oxidative damage.